

Steven L Baughcum

List of Publications by Year in descending order

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39
papers

1,420
citations

516710

16
h-index

414414

32
g-index

39
all docs

39
docs citations

39
times ranked

801
citing authors

#	ARTICLE	IF	CITATIONS
1	Microwave spectroscopic study of malonaldehyde (3-hydroxy-2-propenal). 2. Structure, dipole moment, and tunneling. <i>Journal of the American Chemical Society</i> , 1981, 103, 6296-6303.	13.7	262
2	Microwave spectroscopic study of malonaldehyde. 3. Vibration-rotation interaction and one-dimensional model for proton tunneling. <i>Journal of the American Chemical Society</i> , 1984, 106, 2260-2265.	13.7	221
3	Photofragmentation infrared emission studies of vibrationally excited free radicals CH ₃ and CH ₂ I. <i>Journal of Chemical Physics</i> , 1980, 72, 6531-6545.	3.0	197
4	Microwave spectroscopic study of malonaldehyde. 4. Vibration-rotation interaction in parent species. <i>Journal of the American Chemical Society</i> , 1984, 106, 2265-2267.	13.7	138
5	Laser UV photofragmentation of halogenated molecules. Selective bond dissociation and wavelength-specific quantum yields for excited iodine (2P _{1/2}) and bromine (2P _{1/2}) atoms. <i>The Journal of Physical Chemistry</i> , 1981, 85, 3844-3851.	2.9	122
6	Photofragment fluorescence as an analytical technique: application to gas-phase alkali chlorides. <i>Analytical Chemistry</i> , 1986, 58, 1430-1436.	6.5	68
7	Real-time detection of methyl radicals by diode laser absorption at 608 cm ⁻¹ . <i>Chemical Physics Letters</i> , 1982, 88, 568-571.	2.6	50
8	Removal rate constant measurements for methoxy radical by oxygen over the 298-973 K range. <i>The Journal of Physical Chemistry</i> , 1987, 91, 4653-4655.	2.9	50
9	Laser photodissociation of Hg(CH ₃) ₂ : Infrared emission studies of vibrational and rotational excitation in the CH ₃ fragments. <i>Chemical Physics Letters</i> , 1982, 89, 183-188.	2.6	41
10	An evaluation of upper troposphere NO _x with two models. <i>Journal of Geophysical Research</i> , 1998, 103, 22097-22113.	3.3	31
11	Photofragmentation dynamics and reactive collisions of laser-excited electronic states. <i>Faraday Discussions of the Chemical Society</i> , 1979, 67, 306.	2.2	29
12	Experimental study of particle deposition in the environmental control systems of commercial airliners. <i>Building and Environment</i> , 2016, 96, 62-71.	6.9	22
13	Optically pumped NO (A ² Σ ⁺) ultraviolet laser. <i>Applied Physics Letters</i> , 1985, 46, 22-24.	3.3	21
14	In-flight monitoring of particle deposition in the environmental control systems of commercial airliners in China. <i>Atmospheric Environment</i> , 2017, 154, 118-128.	4.1	21
15	Collisional quenching of methoxy(A ² A ₁) radical. <i>The Journal of Physical Chemistry</i> , 1987, 91, 3253-3259.	2.9	19
16	CH ₃ O+CO removal rate constant measurements over the 473-973 K temperature range. <i>Chemical Physics Letters</i> , 1987, 138, 548-552.	2.6	19
17	Direct deposition of subsonic aircraft emissions into the stratosphere. <i>Journal of Geophysical Research</i> , 1999, 104, 8317-8327.	3.3	16
18	OH reaction rate constant, IR absorption spectrum, ozone depletion potentials and global warming potentials of 2-bromo-3,3,3-trifluoropropene. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	13

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19	Direct measurements of methoxy removal rate constants for collisions with CH ₄ , Ar, N ₂ , Xe, and CF ₄ in the temperature range 673–973 K. Proceedings of the Combustion Institute, 1989, 22, 973-981.	0.3	10
20	The Impact on the Ozone Layer of a Potential Fleet of Civil Hypersonic Aircraft. Earth's Future, 2020, 8, e2020EF001626.	6.3	10
21	Potential Impacts of Supersonic Aircraft Emissions on Ozone and Resulting Forcing on Climate: An Update on Historical Analysis. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034130.	3.3	10
22	NMR studies of furan and thiophene partially oriented in a lyotropic liquid crystal. Journal of Magnetic Resonance, 1972, 7, 253-259.	0.5	9
23	Numerical modeling of particle deposition in the environmental control systems of commercial airliners on ground. Building Simulation, 2017, 10, 265-275.	5.6	9
24	Stratospheric Ozone and Climate Forcing Sensitivity to Cruise Altitudes for Fleets of Potential Supersonic Transport Aircraft. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034971.	3.3	7
25	Thermodynamics of lead diiodide dissociation and the laser-induced fluorescence excitation spectrum of lead monoiodide(A-X). The Journal of Physical Chemistry, 1987, 91, 3840-3845.	2.9	6
26	Measurement of the C ₂ (<i>a</i> ³ Σ ⁺ _u) and C ₂ (<i>X</i> ¹ Σ ⁺ _g) Disappearance Rates with O ₂ from 298 to 1300 Kelvin. ACS Symposium Series, 1983, , 257-266.	0.5	5
27	Gas-phase oxidation of atomic boron and boron monoxide. AIP Conference Proceedings, 1986, , .	0.4	5
28	<title>Free Radical Studies By Excimer Laser Ultraviolet Photolysis</title>. Proceedings of SPIE, 1978, , .	0.8	2
29	Laser-Initiated Chain Reactions In The Partial Oxidation Of Methane. , 1986, , .		2
30	Correction to "OH reaction rate constant, IR absorption spectrum, ozone depletion potentials and global warming potentials of 2-bromo-3,3-difluoropropene". Journal of Geophysical Research, 2012, 117, .	3.3	2
31	Photofragment Fluorescence As A Sensitive Probe For Gas-Phase Alkali Compounds And Their Photochemistry. Proceedings of SPIE, 1985, , .	0.8	1
32	A Hybrid Chemical/Excimer Laser Concept. Proceedings of SPIE, 1988, 0875, 149.	0.8	1
33	Absorption by ground-state lead atoms of the 283.3-nm resonant line from a lead hollow cathode lamp: an absolute number density calibration. The Journal of Physical Chemistry, 1989, 93, 7336-7338.	2.9	1
34	Production Of Gallium Atoms By Excimer Laser Photolysis Of Trimethylgallium. Proceedings of SPIE, 1985, , .	0.8	0
35	Absorption sensitivity enhancement in methyl fluoride at 1200cm ⁻¹ using Stark polarization rotation. Journal of the Optical Society of America B: Optical Physics, 1985, 2, 1480.	2.1	0
36	Photochemistry of trimethylgallium with applications to atomic gallium reaction kinetics. AIP Conference Proceedings, 1986, , .	0.4	0

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37	Photofragment fluorescence as an analytical technique: Application to gas-phase alkali compounds. AIP Conference Proceedings, 1986, , .	0.4	0
38	Laser Photochemistry Of Gallium-Containing Compounds. Proceedings of SPIE, 1986, , .	0.8	0
39	Quantifying the Fuel Consumption Penalties for an Operational Contrail Avoidance System. , 0, , .		0